Addressing industrial pollution in Indonesia: The nexus between regulation and redress seeking

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4 Provincial environmental agencies in East and West Java

Patchwork of regulatory approaches with limited results

Over the past decades, the legal and institutional frameworks for regulating the environmental performance of industries in Indonesia have improved in several ways (Rahmadi, 2006; Hardjasoemantri, 1994: 29–30; 2006: 450–468). However, as the previous chapter explained, they still have considerable weaknesses. Several studies have shown that implementing legislation is hindered by the lack of environmental institutions' staff, expertise and material (Santosa, 2014). Studies by Fatimah (2017) and Sembiring (2017) have also indicated that the resources that are available are not used to their full potential. Fatimah's study on District and Provincial environmental agencies in East Java demonstrated that these agencies often lack a proper information management system. This absence hampers systematic assessment of the performance of industries and consistent follow-up on violations. It also conceals the role that government institutions play in the regulation process, and hinders the possibility to assess the government's actions critically.

This chapter seeks to provide more insight into the regulatory practices of environmental agencies. It attempts to identify which regulatory approaches they apply, why they do so, and how these approaches affect the promotion of the public interest in a clean environment.

The previous chapter explained that after decentralisation, Districts are, in principle, authorised to regulate industries within their territories. However, in practice, it is Provinces rather than Districts that are frequently involved in the process of regulating industries. Provinces are particularly involved when a pollution case has caught the attention of the public (e.g., because the pollution problem led to social unrest or the media reported on the case).

This chapter focuses on the practices of Provincial environmental agencies, particularly on the agencies of East Java and West Java.[1] Throughout 2011 and 2012, I observed the day-to-day practices of these agencies during several fieldwork periods. I joined the West Java agency in their daily activities for nearly three months and the agency in East Java for more than a month. My time at these agencies also allowed me to gather archival documents, through

1 Due to the time and capacity limitations of this research, it was not possible to study other Indonesian administrative levels and sectors engaged in environmental management in-depth.

which I could study the regulatory trajectories of a considerable number of pollution cases in which these agencies had played a role.[2]

Both agencies were quite active in regulating polluting industries. However, a closer look reveals that there are some important differences in their regulatory approaches that impact their effectiveness.

This chapter focuses on the practices of monitoring and following up on violations. With regards to monitoring, it looks at how the authorised government should regularly monitor its licensees. However, it also pays attention to how the agencies handle industrial self-monitoring reports, how they verify complaints, how they deal with the Ministerial monitoring programme PROPER and the Water Patrol initiative that is unique to East Java. It seeks to provide insights into how governments follow up on violations. In so doing, it considers whether and why governments follow up by imposing administrative sanctions, initiating criminal trails, settling disputes or through alternative means.

The following sections will describe the Provincial environmental agencies. Section 2 focuses on West Java, while section 3 considers East Java. Each section begins with an analysis of the geographical, socio-economic and institutional settings in which these agencies operate. The sections then focus on monitoring activities and ways that governments follow up on detected violations.[3]

This chapter concludes that the environmental agencies in the two Provinces differ considerably in how they detect and follow-up on violations. Nevertheless, overall there are considerable inconsistencies in the regulatory process. The agencies all utilise a patchwork of monitoring activities. However, they do not efficiently use the information they gather. Furthermore, the administrative law framework is not used to its potential. Officials often prefer to depend on alternative regulatory approaches that governments have poorly integrated with the basic regulatory mechanism for command and control. Moreover, particularly in West Java, officials prefer to rely on the criminal and private law frameworks to respond to violations.

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2 I also conducted fieldwork at the provincial environmental agency in North Maluku for several weeks. However, this chapter does not include the findings from this fieldwork because that agency's position differs considerably from that of the East and West Java agencies. Nearly all of the industrial activities in North Maluku are related to mining, and so mining agencies are intensively involved in regulating these activities. Additional research is required to understand the relationship between the environmental and mining agencies, in regulating the latter's environmental impact. That this agency barely operated from an office also complicated the research. Instead, officials mostly worked from home, which made it difficult to observe their daily practices.

3 This chapter focuses on monitoring and enforcement because, at the time of fieldwork, the government had only introduced the environmental license and provincial agencies had issued few, if any, of them. Nevertheless, as Kartikasari (2016) shows (see chapter 3), norm-setting continues to be a problematic aspect of the regulation process.

1 Regulating industrial water pollution in East Java Province

The Brantas is a large river in East Java Province. It originates near the city of Malang and flows over 320 kilometres towards the Provincial capital Surabaya. In 1994, approximately 13.7 million people lived in the Brantas watershed area, including Surabaya's three million inhabitants.[4] The river water is a vital source for drinking water, as well as for agricultural and industrial activities. However, as the river water approaches Surabaya, it becomes increasingly polluted with domestic, industrial and agricultural waste.[5] The drinking water company PDAM acknowledged that it had difficulty purifying the water to meet the required standards. According to the frontman of local environmental NGO Ecoton, Prigi Arisandi, the levels of mercury in 2010 were a hundred times above the legal standard. Low oxygen levels also caused mass fish deaths occasionally, while people reported the negative effects of the poor river water quality on their health.[6]

Nevertheless, between 2009 and 2012, there were indications that the water quality was improving somewhat. These improvements may have been due to the pressure that civil society actors had exerted on the government to increase its regulatory efforts. The East Java area has a history of civil society actors pressuring the government to take environmental measures. After serious incidents occurred in the 1970s involving polluted drinking water, civil society organisations demanded the government enforce water quality standards. In response, in the 1970s and 1980s, the government began conducting unannounced river inspections and closing polluting factories. It initiated progressive regulatory initiatives (e.g., PROKASIH and PROPER), which it later developed into national programmes (Lucas and Djati, 2007).

However, an unclear division of authority, the lack of proper legal instruments and enforcement had always been problematic. According to Lucas and Djati, these issues only increased after the fall of Suharto. The government began focusing mainly on surviving politically, rather than taking action against polluting industries. As a result, the water quality soon deteriorated. Furthermore, communities began directing their complaints and protests at

4 The Brantas River splits into two approximately 60 kilometres before it reaches the sea and just before it enters the urban area of Surabaya, becoming the Kali Surabaya and the Kali Porong. The Kali Surabaya flows further in the direction of the city and merges with Kali Tengah, known for its high pollution level. Eventually, in the city's heart, the Kali Surabaya splits a final time, into the Kali Mas and the Kali Wonokromo (Laporan Pemantauan Kualitas Air Sungai di Jawa Timur (PROKASIH) Tahun 2009, by Bidang Pengawasan dan Pengendalian BLH Provinsi Jawa Timur (2010)).

5 According to the 2010 East Java Environmental status report (Status Lingkungan Hidup Dearah), 1122 large and middle scale industries are located in the province.

6 'Environmental protection in Indonesia', interview with Prigi Arisandi. http://gardabrantas.com/2010/09/ecoton-lawsuit-against-east-java-gorvernor-for-river-pollution-control/.

industries rather than the government (Lucas and Djati, 2007; 2000: 1-6, 11-12, 20-1).

Nevertheless, some years after the *Reformasi* started, Surabayan civil society organisations again took a critical stand against the regulatory government. In 2007, environmental NGO Ecoton sued the East Java Governor and the Provincial Environmental Agency for insufficiently regulating the industrial impact on the Kali Surabaya River (i.e., a branch of the Brantas River). The NGO demanded that the Province improve the river water quality standards and use administrative coercion against violating industries by closing outlets or revoking their license.[7] A 2008 agreement eventually settled the case, where the government promised to 'take measures against violators in line with their tasks and authority'. Soon after, the Province established the Water Patrol (*Patroli Air*). It was a monitoring initiative involving various institutions, NGOs and journalists, which became an important regulatory instrument in East Java.

In 2010, NGO Ecoton again filed a lawsuit, arguing that the Governor and the environmental agency had not complied with the 2008 agreement. A new agreement settled this charge.

These developments demonstrate that critically minded civil society actors demanding the government take regulatory action did lead to additional regulatory efforts, which appeared to improve environmental conditions. However, the civil society demands did not lead the government to clarify and formally codify the responsibilities of its separate institutions.

1.1 A sketch of the East Java environmental agency

This subsection aims to explain how the East Java environmental agency detected violations and responded to non-compliant behaviour. The Provincial environmental agency of East Java is located in Surabaya and employs over one hundred officials.[8] The Ministry of Environment had rewarded the agency for its good data management. Nevertheless, Fatimah (2017) argued that the agency lacked a proper data management system, as it did not have a complete inventory of the industries it had licenced and should monitor. Furthermore,

7 In response to the NGO's demands, the Provincial government did not dispute that the government had an enforcement duty. However, either the District or the Central Government was authorised, the former because it had issued the license. The provincial government mentioned the River Basin Organisation (Balai Besar Wilayah Sungai that is part of the Public Works Department) as an institution with potential authority because the Brantas River was a river of national strategic interest. The Province also argued that it had already undertaken regulatory measures because it had carried out inspections through the PROKASIH and PROPER programmes and had cooperated with the police to prosecute violators criminally. It had also sent warnings to violators. These actions notably contradict with the argument that the government was not authorised in the case.

8 The agency employed 114 officials in 2010 and 134 officials in 2011.

there are inconsistencies in various reports on the number of sanctions that the environmental agency imposed on behalf of the Governor (Fatimah, 2017).

Two of the four agency's units were involved with regulating industries.[9] The 'Monitoring and Control' unit consisted of twenty-two officials and engaged in regulatory efforts such as inspections daily.[10] Officially, the unit consisted of subunits that focused on water and air pollution. However, in practice, the officials shared many of the monitoring tasks. The much smaller Communication unit handled complaints from citizens but mostly engaged with drafting the agency's performance reports, which informed the agency's rewards for its data management.

1.2 Monitoring in East Java

The East Java agency's monitoring efforts consisted of various elements. The regular monitoring efforts included inspection visits and assessments of industrial self-monitoring reports. The agency also carried out inspections within the context of its Water Patrol, and it was available to verify citizen complaints. This section focuses on the agency's regular monitoring efforts, its Water Patrol activities, and its complaint handling.[11]

1.2.1 Regular monitoring efforts and self-monitoring reports in East Java

As part of its efforts to regularly monitor industries, the East Java agency inspected 154 industries between January and October 2012, and it planned to inspect some 50 more that same year. According to an official, the Provincial environmental agency had the authority to monitor about 1400 industries regularly. The Provincial agency based its authority on the industries' locations within the Province and the considerable industrial risk of causing pollution (e.g., through wastewater discharge or hazardous material use). Furthermore, these industries were not included in the Ministerial monitoring programme PROPER.

The Provincial government considered that it had the authority to monitor a relatively high number of cases because officials reasoned that their mandate

9 The agency's four units were the Monitoring and Control unit, the Communication unit (responsible for handling complaints), the Environmental Planning unit (in charge of Environmental Impact Assessments and issuing environmental licenses), and the Conservation and Recovery unit.

10 This unit was called *Badan Pengawasan dan Pengendalian* or *'Wasdal.'*

11 The East Java environmental agency also carried out inspections within the context of the Ministerial monitoring programme, PROPER (see chapter 3). However, this research did not focus on this mode of monitoring by the East Java environmental agency because during the time of the fieldwork (October and November 2012) the agency was not conducting PROPER inspections.

extended beyond the EMA 2009 case limits. One Provincial official stated, 'The Province is always authorised. There is no problem with the division of authority between the Districts and the Province. All just join'. Another official said, 'The Districts issue the licenses, together we do the rest'. He claimed the Provincial government always invited District officials to assist with monitoring. Although two Provincial officials claimed not to know whether the Districts were properly monitoring and enforcing standards, another believed that the District officials did little environmental monitoring.

Since Provincial officials believed they had the authority to monitor 1400 industries, they had to select on which of those to focus. An official explained that they prioritised monitoring industries located along the Brantas and Solo Rivers. However, a regular inspection visit I joined visited two industries that were not located along those rivers and did not discharge wastewater or use hazardous waste. It appeared the officials had selected these industries rather randomly. These Provincial officials also had not invited District environmental agency officials to join these inspections.

Therefore, it appeared that any policy which described industry selection procedures and Provincial and District monitoring roles were either insufficiently specific or poorly implemented. As a result, officials had considerable room for discretion.

In preparing regular monitoring visits, officials collected as many industrial documents as possible (e.g., licenses, environmental impact assessments, or self-monitoring reports), an official clarified. There was no general archive room, and so officials usually kept piles of documents on or under their desks. One official commented that the Province often did not have access to the required documents, because other institutions had issued or approved them.

Before a regular inspection visit, the agency would usually send the industry a letter informing them of the upcoming agency visit. However, this was not the case in the two inspections I observed. For unknown reasons, the Provincial officials decided to visit these industries one day before the actual visit. As a result, the officials claimed to be less well prepared than normal. There had been no time to announce the visit or gather and analyse relevant documents. The poor preparation impacted the inspections, particularly because the officials spent a considerable amount of time arranging formalities and checking documents, rather than assessing the actual situation on the industrial plant sites.

Apart from the regular monitoring visits, the East Java agency assessed self-monitoring reports. The head of the water pollution subunit estimated that between 50 and 100 industries sent their self-monitoring reports to the East Java agency on a monthly or biannual basis. However, the agency did not keep records of self-monitoring submissions, and the subunit head also did not know how many industries were obligated to self-report to the Provincial agency. There was no complete inventory of the industries that the Province had licensed, and there was no overview of cases in which non-

compliant industries had been summoned to send their self-monitoring reports to the Province or District that had issued the license.

Thus, it was unclear on what grounds the Provincial agency received and reviewed the self-monitoring reports. Nevertheless, once the agency had received them, it divided the reports among officials from various units. They processed the data but did not store their findings in a shared data management system. During the first nine months of 2012, one official said she processed 69 reports and planned to do several more that year. However, she did not consider this a priority, and would only work on them when she had spare time. Nevertheless, as a result of these assessments, she had already drafted a warning letter to the violator seven times. However, for unknown reasons, these warning letters were still sitting unsent on the unit head's desk. Due to this experience, she did not plan to spend any more time writing warning letters if the self-monitoring reports indicated non-compliant behaviour.

The EMA 2009 established a clear obligation on licensees to self-monitor and self-report. However, it is evident that the East Java officials did not efficiently use the self-monitoring information since they did not prioritise the assessments, centralise data stores or consistently follow up on violations. Many officials reportedly distrusted the accuracy of the self-monitoring reports, suspecting the industries of manipulating the information in the reports. The unclear division of authority may have also played a role in the inconsistent assessments since it was unclear which institution was responsible for following up on the reports, and so no institution could be held accountable for not properly making use of them.

1.2.2 Water Patrol

The 'Water Patrol' is a regulatory initiative unique to East Java and is more geared towards enforcement than the aforementioned regulatory inspections and self-monitoring report assessments.

The government established the Water Patrol in 2008. Approximately once a month, officials from various institutions such as Provincial and District governments gathered to inspect industries located along the Brantas River together. Journalists and representatives of an NGO would also join them.[12] The group usually consisted of approximately twenty people and would embark on unannounced inspections. On small motorboats, members of the

12 The institutions and organisations involved in the Water Patrol are the East Java provincial environmental agency, Perum Jasa Tirta I, the East Java Industry and Trade agency, the East Java Public Waterworks agency, the environmental agencies of the Districts of Surabaya, Sidoarjo, Gresik, and Mojokerto, Brantas Water Board (Balai Besar Wilayah Sungai (BBWS) Brantas), the Technical Implementation Unit (UPT) under the Ministry of Public Works Buntung Paketingan, the NGO *Konsorsium Lingkungan Hidup,* various journalists and the drinking water company PDAM Surya Sembada of Surabaya.

Water Patrol would navigate along the Brantas River and its branches and take samples from the industries' wastewater outlets. When they suspected a regulatory violation, they would follow up with more thorough inspections. For example, they would examine samples in a lab or inspect the industry's terrain.

An agreement between the Provincial environmental agency, the police of Surabaya city and state company Jasa Tirta established the Water Patrol. Jasa Tirta was responsible for taxing industries for their use of river water in their operations. It did not have a direct interest in improving the river's water quality because it did not affect tax rates. Furthermore, the quality of the river water was the responsibility of the Provincial environmental agency, a director of one of Jasa Tirta's divisions explained. Nevertheless, Jasa Tirta significantly contributed human and financial resources to the Water Patrol. The director considered it a moral duty to make an effort to improve the water quality. At the same time, the drinking company PDAM had already complained several times to Jasa Tirta about the poor quality of the river water.

At first sight, the participation of the many officials from different institutions seemed inefficient and could have potentially led to complications regarding the division of authority between them. However, officials pointed towards the advantages of the broad participation in the Water Patrol. The multiple institutions and press confronting the industries signalled the importance of the Water Patrol's actions. Different officials keeping an eye on one another during the inspections would also deter corruption.

On 24 October 2012, a group of approximately twenty officials as well as several Jasa Tirta employees, seven journalists, and two NGO representatives gathered at one of Jasa Tirta's offices located along the Surabaya River.[13] They split into three smaller groups: two boat teams set out to take water samples from the outlets, while one travelled by car to inspect industries. The group selected industries for inspection that all had a past of non-compliant behaviour or had been suspected of non-compliance.

One of the boat teams took water samples at two industrial outlets. Both industries already faced criminal charges related to environmental violations. On board, a quick test of the oxygen level of the wastewater showed that in one case, the wastewater quality was acceptable. Although the quick test merely indicated the oxygen level, the group would not bring the water sample to the laboratory for further inspection. The group would also not inform the industry that they had conducted the inspection. The quick test of the wastewater sample from the second industry indicated that the oxygen level was below tolerable standards. Therefore, the group would send the sample to the laboratory, but the test did not give cause for immediate action. One official

13 The officials were from the provincial environmental agency, the environmental agency of Surabaya, the East Java Public Water Works agency, the Brantas Water Board and the drinking water company PDAM of Surabaya.

reasoned that the industry was already involved in a criminal trial, which he considered to be the maximum penalty and a more effective reaction than any administrative sanction. He seemed unaware that by imposing an administrative sanction, he could require the industry to halt the violation immediately.

The boat team passed other industries located along the Brantas River but did not take any other samples. In two cases, an official suspected that the industries had illegal underwater outlets. However, it was not possible to take valid samples to prove this, and the team took no further action. The team in the other boat, however, observed that warm, white water sprang from an underwater outlet and warned the team in the car, which then inspected the industry.

The car team inspected three industries that day, and the two boat teams took four samples, sending three of them to the lab for further examination. Thus, that day, some twenty officials inspected seven industries. However, it seemed that they did not use information optimally. For example, the groups did not bring all of the samples to the laboratory and not all indications of violating behaviour were followed up with more thorough inspections concerning, e.g., underwater outlets. Furthermore, it appeared that officials did not see much of a role for administrative law when industries were involved in a criminal trial, even if violations were taking place that immediately polluted the environment.

Despite the ostensible inefficiencies and inconsistencies, the Water Patrol cleverly avoided the problems related to the unclear division of authority. The involvement of the many institutions created a sense of multi-institutional ownership, and their presence had the potential to impress non-compliant industries. The relative consistency of monitoring and fairly serious measures against non-compliance may explain the success of the Water Patrol's deterrence mechanisms. In that sense, the Water Patrol had characteristics of command and control regulation. It may be that command and control regulation can be effective in Indonesia, since the Brantas River's water quality improved since the government established the Water Patrol. This possibility exists, even though the Ministry and many others in Indonesia refuse to believe this (see the discussion on this issue in chapter 2).

1.2.3 Complaint handling in East Java

Before the 2010 promulgation of the Ministerial Regulation on complaint handling, the East Java environmental agency received approximately eight complaints per year. Following the Ministerial Regulation, the agency established a complaint handling procedure. Since then, the number of complaints increased. The Communication unit, responsible for handling complaints, had received 33 complaints in the first ten months of 2012 and had verified only 12 of them. An official from the Communication unit made contradicting statements on whether this was due to the unit's lack of capacity or because

two-thirds of the cases did not fall under the Province's authority. The Communication unit found violations in 11 of the 12 cases and informed the Monitoring and Control unit, as well as the complainants, about their findings. It was the responsibility of the Monitoring and Control unit to decide how to follow-up on a case.

Despite the increased number of complaints since 2010, the overall amount remained relatively low, especially when compared to the West Java environmental agency, which received 125 complaints in 2011. There are several possible explanations for the relatively low number of complaints in East Java. First, complainants might not be aware that they can file a complaint at this agency, or they might have low expectations of how the agency will handle the case. Furthermore, complainants had an alternative in the Provincial police. A police officer stated that the Provincial police had a special environmental department, which received many complaints. The police would respond by immediately verifying the complaint and trying to settle the case through mediation. The District or Provincial level environmental agencies were not involved.

Fatimah (2017) shows that between 2012 and 2015, the number of complaints filed to the environmental agency more than doubled, from 33 to 74. In 24 of the 74 cases in 2015, the Province detected violations. In two cases, the Governor imposed administrative coercion. In an unknown number of other cases, he imposed a warning (Fatimah, 2017). Further research is required to explain the reasons behind the increase in the number of complaints.

1.3 Following up on detected violations in East Java

The previous section discussed the various modes of monitoring that the East Java environmental agency employed. This section discusses what the agency did once it detected a violation.

The preferred response to a violation is to give the violating industry guidance (*pembinaan*), the head of the environmental agency and the head of the Water Pollution subunit of the Monitoring and Control unit declared. By receiving technical advice and using persuasion, the industry can perform better. The agency's head said, 'The Governor has a 'Pro Job, Pro Poor' policy, so we cannot enforce the law because people would lose their job'. The subunit's head also stated that the agency is hesitant to use law enforcement, due to the possible impact on the industries' employees.

The agency's policy explicitly considered administrative sanctioning to be inappropriate when a violation caused damage. In the case of damage, the environmental agency should facilitate dispute settlement between the violator and the affected citizens, or assist the latter in bringing the case to court and gaining compensation for their damages. Criminal sanctioning was appropriate in the case of fatalities or wounded victims.

The practice was different from the representatives' statements and the presented policies. How a violation came to light informed how officials responded to it, rather than the characteristics of the violation. Therefore, this subsection discusses how official responses compared across violation notification methods. It closes with a description of an exceptional case of administrative law enforcement, where officials closed down a factory.

1.3.1 Following up on regular monitoring

According to the head of the Water Pollution subunit, the regular monitoring efforts indicated that approximately 40 per cent of the industries were non-compliant. However, the agency never imposed an administrative sanction in response. According to the head of the Monitoring and Control unit, the primary aim of the regular monitoring visits was to maintain good relations with the industries. If the agency detected violations, officials would give guidance (*pembinaan*) on how to achieve compliance. During one observed regular monitoring visit, officials did verbally threaten the industry with penalties. When an employee of a cake factory asked what would happen if they did not take the suggested measures, an official replied that if there was be no progress, the agency could eventually impose an administrative sanction and even pursue criminal prosecution. After the visit, the official added that she did not think the next visit would occur any time soon.

1.3.2 Following up on complaint verification

The agency detected most industrial violations through handling complaints and usually sent them to the District. The District would then issue a warning. During my fieldwork in October 2012, the Monitoring and Control unit of the Province followed up on three pollution cases that had been discovered through complaint verification. An official from the Monitoring and Control unit explained that he planned to bring one of these cases to a workshop on dispute settlement, organised by the Ministry of Environment, to ask the Ministry's advice on how to handle the case. It was a difficult case, the official said, because many people feared that if the government took measures to halt the violations, this would mean the industry would close, and the industry's employees would lose their jobs.

1.3.3 Following up on Water Patrol inspections & the case of closing a sugar factory

Water Patrol's initial policy had been only to give guidance (*pembinaan*) to violators. However, between 2008 and 2011, Water Patrol investigations led to warnings in at least 23 cases. It is unclear which government institution issued these warnings. In 14 of the 23 cases, criminal investigations (*penyidikan*) followed. In 2 cases, government officials imposed fines, even though implementing regulation on administrative fines did not yet exist. I found no data on how many industries began complying after these measures. Several officials

considered the Water Patrol to be successful and to have contributed to the improvement of the overall water quality of the Brantas River in recent years.

The Water Patrol played an especially remarkable role in a case involving a polluting sugar factory, Gempolkrep. The Patrol delivered proof of pollutions, which in July 2012 led to a severe administrative sanction that involved the factory's temporary closure. Nevertheless, a closer look reveals that the regulation process was not so straightforward. It was not clear whether the sugar factory had caused the pollution, what the 'administrative coercion' sanction involved, and to what extent the result of the regulation process had halted the violation.

On 24 May 2012, a short circuit in the factory's power supply caused highly concentrated sugar water to flow into the condenser and eventually leaked into the Brantas River for eight to twelve hours. Two days later, the factory reported the incident to Mojokerto's District environmental agency and sent copies to the East Java Province environmental agency and the Ministry of Environment.

On 27 May, another incident caused the wastewater treatment system to overload, and sugar water leaked into the river again. A member of an environmental NGO spotted dead fish floating in the Brantas River, some 20 kilometres downstream from the Gempolkrep sugar factory and informed the East Java environmental agency. The case had also raised media attention. A national newspaper called for the Governor to act. A local newspaper reported that people living 60 kilometres downstream from the factory, in Surabaya, caught the dead fish that were floating on the river surface and planned to consume or sell them.

The next day, on 28 May, the Governor sent the Water Patrol to find the cause of the mass fish death. The Patrol began the inspections in Surabaya. As it went further upstream along the many industries located along the Brantas, the Patrol claimed that the trace led undoubtedly to the sugar factory.

However, reports from this inspection and the meetings that followed told a different story. During the 28 May inspection, the Water Patrol had taken samples from only four of the approximately one hundred industries that were located along that part of the Brantas River. In the past, the Water Patrol had found three of the four industries to be non-compliant. The sugar factory had a clean reputation. It appears the industry's notification to the environmental institutions of the incidents or the NGO member's warning might have triggered the Patrol to include the sugar factory in its inspection.

Lab analyses of the water samples showed that the wastewater from all four industries did not meet the legal quality standards. The sugar and paper factories were violating the standards to a much higher degree than the other two, but surprisingly, the government did not take further measures against the paper factory. A small comment in the meeting's minutes suggested that was because the government was already criminally prosecuting the paper factory, implying that additional administrative sanctions were of no use.

All arrows now pointed at the sugar factory. On 4 July, the Governor imposed 'administrative coercion', meaning that the Governor ordered the sugar factory to stop its production process. This order was the starting point of months of negotiations between the government and the factory on which measures would be sufficient to lift the sanction. The factory claimed that the sanction was unjust because the incidents on 24 and 27 May had been dealt with properly, and that no violations were taking place when the government imposed the sanction. The government nevertheless demanded that the factory build a 'closed loop system' and an emergency pond, that in the future could prevent highly concentred sugar water from leaking into the river. After continuous monitoring visits and meetings, the factory eventually carried out the orders, and the government lifted the sanction. According to some, however, the factory never stopped its production process during the time the sanction was in effect.

From the moment the government imposed the sanction, protestors rallied against it. Some even physically threatened officials who visited the factory. Media coverage indicated the protesters were sugar cane farmers who feared that they would not be able to sell their yields if the factory closed. However, there were also rumours that the factory had hired protesters to pressure the government to lift the sanction. One official commented that the threatening experience made it unlikely that the Governor would again impose a similar sanction in the future.

People from the villages near the sugar factory did not join the protests, but neither sis they complain about the factory's environmental impact. There are several explanations for their reluctant attitude. First, many villagers were economically dependent on the factory. Over the decades, they had grown accustomed to water pollution. In addition, they feared that protests would lead to a violent confrontation with the factory's security force. This security force traditionally recruited its members from another nearby village that was located upstream from the industry, and therefore, did not experience the water pollution.

The government measures did result in the factory changing its production and wastewater systems. These could prevent pollution in the future. Thus, in this sense, it appears that the Water Patrol's efforts were potentially effective, although its procedures remain unclear.

1.4 Some conclusions on regulation by the East Java agency

The previous section on the East Java environmental agency's various modes of monitoring showed that, in practice, the detection method matters more than other characteristics for how the agency followed-up on a violation. In case of regular monitoring, the agency was likely to respond by providing guidance, violations discovered through complaint verifications were referred back to District governments, and if the Water Patrol found a violation, an

administrative sanction or criminal law trial would likely follow. These differing approaches indicated that the environmental agency was inclined to take tougher measures against violating industries when it cooperated with other institutions rather than when it operated alone. The argument that enforcement would have an undesirable effect on the industry's employees carried less weight in these cases.

2 The West Java environmental agency

This subsection seeks to understand which monitoring efforts the West Java environmental agency employed to detect violations, and how it responded to non-compliant behaviour. It also identifies some of the main differences and similarities between the East and West Java environmental agency industrial regulatory efforts. It will become clear that, similar to the East Java agency, the West Java agency's modes of monitoring formed a patchwork of information sources on how industries performed. The agency did not use these sources coherently, hampering the effective detection of non-compliant behaviour. Nevertheless, the agencies differed because the West Java agency was more inclined to handle pollution cases, when possible, by mediating between the violator and the affected citizens, rather than fulfilling an independent role as regulator.

2.1 A sketch the West Java environmental agency

West Java Province has approximately 46 million inhabitants. The Province neighbours Indonesia's capital and economic heart, Jakarta, making it an attractive area for industries to settle. Several large rivers begin in this Province, such as the Citarum and Ciliwung. Some rivers eventually flow towards Jakarta and should provide this city with drinking water. However, due to the domestic and industrial waste discharged into them, the river water is barely suitable for drinking. As a result, Jakarta depends on extracted groundwater, which contributes to the sinking of the city, causing major floods in the country's capital. Large-scale engineering projects are ongoing and are meant to protect the city against floods. However, it is important to understand why the rivers cannot provide the capital with water of sufficient quality. How do the regulatory approaches in upstream West Java, where many industries operate, fail to guarantee sufficient amounts of potable river water for downstream Jakarta?

The Provincial environmental agency of West Java holds office in the city centre of the Provincial capital Bandung, employing 100 officials in 2012. The agency consisted of four units, two of which were engaged in monitoring of and regulatory enforcement against industrial activities. The Environmental Pollution Management unit consisted of two subunits. The Monitoring subunit employed seven officials. It monitored the general river water quality and

processed the industries' self-monitoring reports. The 'Guidance Control' subunit consisted of eight officials. They carried out inspections within the context of PROPER and advised industries on how to improve their environmental performance.[14] As part of the Compliance, Partnerships and Capacity unit,[15] the Compliance subunit handled complaints and all cases involving hazardous and toxic materials. A young, charismatic female official, who was not afraid to confront violators, led the subunit's five officials.[16]

The agency's general policy on law enforcement, as one presentation described it, emphasised the importance of monitoring, providing guidance to industries, dispute resolution and building consensus among all involved parties. By not mentioning administrative or criminal sanctioning, it underlined the importance of relatively non-confrontational regulatory strategies.

Within the agency, the Environmental Pollution Management unit and the Compliance, Partnerships and Capacity unit were responsible for executing the agency's policy. The units were housed together, in one large room on the fourth floor of the agency's office building. However, the unit officials had different ideas on regulatory strategies. The Environmental Pollution Management unit aimed to maintain good relationships with industries, supporting and kindly persuading them to improve their environmental management. The unit head explained, 'Industries need help to become compliant. We cannot just give sanctions to them. They are important for the economy, and people need their jobs at the industries'. By contrast, the Compliance subunit had a reputation for taking serious enforcement measures against violators. Between 2009 and 2011, this subunit had been responsible for imposing administrative sanctions in 22 cases. In another 6 cases, it had initiated criminal prosecution, and in 9 cases, its mediations between the violating industry and affected citizens had resulted in agreements.

Below I will elaborate on the regulatory efforts of these units and subunits. The next subsection will discuss the various modes of monitoring through which the agency gathered information about the environmental behaviour of industries and was able to detect violations. Section 2.3 will explain how the agency followed up on detected violations and will demonstrate that the monitoring mode was often a determining factor in how the agency dealt with a violation, similar to the East Java agency's practices.

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14 This unit and the subunits were called *Bidang Penggelolaan Lingkungan, Sub-bidang Pemantauan* and *Sub-bidang Pembinaan Pengendalian*, respectively.

15 The unit and subunit were named Bidang *penaatan hukum, kemitraan dan kapasitas* and *Sub-bidang Penaatan Hukum*, respectively.

16 While one of the officials had a law degree, the other four subunit officials had a background in environmental technique.

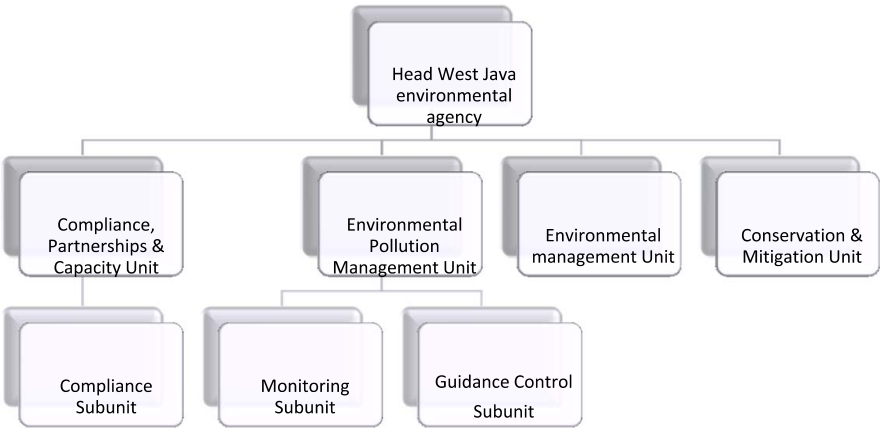

Figure 1. West Java environmental agency's organisational chart (simplified, focussing on subunits involved in regulation of industrial pollution)

2.2 Monitoring in West Java

This subsection provides more insight into the various modes of monitoring that the West Java agency employed to detect violations, and the roles of its different (sub-)units. It discusses the agency's regular monitoring efforts, as well as its inspections that took place within the context of PROPER and inspections that followed a complaint.

2.2.1 Monitoring the general river quality, regular monitoring, and self-monitoring in West Java

The West Java agency invested considerable time and money into monitoring the general water quality of seven large rivers in the Province.[17] Five times during the dry season, a team of officials from the Monitoring subunit, together with laboratory experts, would go on an expedition to take water samples at various locations along the rivers. The agency published certain results on its website. However, the Province could not do much when the results showed that the water quality was below government standards, an official leading the expedition explained. Since decentralisation, the Districts primarily had authority to regulate the sources of pollution within their territory, not the Province. However, Districts were unlikely to take action because of their economic interests in these industries. When the Province found that the water

17 Four rivers were monitored at the behest of the Ministry of Environment: the Cidanduy, Cisadane, Ciliwung and Citarum. The other three rivers – the Cilongksi, Cilamaya and Cimanuk – were monitored on the basis of West Java Provincial Regulation 3/2004.

quality was poor, the only thing it could do was organise a coordination meeting with the involved governments. But even this it had never done. Thus, the efforts to monitor the general water quality had not led to any enforcement measures.

Similar to the East Java agency, the West Java agency did not have an inventory of the industries that fell under the Province's monitoring and enforcement authority. However, unlike the East Java agency, the West Java agency usually did not inspect industries on a regular basis, but only when there was an indication that a violation was taking place.[18]

Nevertheless, the Monitoring subunit assessed the industries' self-monitoring reports. That subunit's 2010 analytical summary stated that 164 industries had sent a total of 743 self-monitoring reports to the Provincial agency. Some industries reported every month, others only once per year, but on average, the industries reported 4.5 times during 2010. In 231 reports (31 per cent), the industries reported they had not complied with the standards. The summary only mentioned which standards the industries had not met (e.g., the level of chemical or biological oxygen demand), but did not mention the extent to which industries had violated the standards.

It appeared that the agency used these reports in a rather haphazard manner, to put it mildly. The summary announced that the agency would further investigate five industries, four of which had not mentioned any violation in their the self-monitoring reports. Ten industries had reported that they had severely violated the legal standards, and one industry admitted in the eleven reports it sent during 2010 that it had not once been fully compliant. However, the subunit's summary did not announce plans for further inspection or enforcement measures towards these industries.

Notably, the summary only reported on industries in 17 of the Province's 27 Districts. The summary did not explain why it did not include industries from other Districts. The official who processed the self-monitoring reports explained that many industries sent their reports to the District, the Province and the Ministry of Environment, 'just to be sure'. She was not aware of any efforts to coordinate the assessments of the reports between the various levels. It was possible that officials at other institutions were processing the same reports as the Provincial environmental agency.

Despite the summary implying that the environmental agency had organised the assessments quite well, in reality, it had not. The self-monitoring reports lay stacked up against the walls of a small office room, waiting for officials to process them. One part-time official would pick a report from the piles and manually process the data into a spreadsheet. Due to time constraints, the official could not process all of the reports into digital files. She claimed to prioritise reports from industries that were 'on the agency's radar', e.g.,

18 The only exceptions were inspections carried out within PROPER and in which an indication of a violation was not required.

because citizens had filed complaints against the company or because PROPER inspections had discovered non-compliant behaviour.

In conclusion, the Province had substantial information about the local industrial performance through its general river quality monitoring and its assessment of the self-monitoring reports. However, it appeared that it did not fully use this data in considering enforcement measures.

2.2.2 *PROPER inspections in West Java*

The inspections that the Provincial agency carried out on behalf of the Ministry of Environment for its PROPER programme provided another source of information on industrial compliance.[19] The agency invested considerable time and effort in carrying out these inspections. Before 2011, the Ministry conducted the PROPER inspections, and the Province usually only accompanied the Ministry. However, in recent years, the Province would carry out part of the PROPER inspections independently. In 2011, the Guidance subunit of the Provincial agency planned to inspect 285 companies for PROPER. Teams of two or three officials usually carried out these inspections. From January until July, the head of the subunit herself spent three days a week accompanying PROPER inspections.

During an inspection day, the officials would take water samples and inspect the industry's terrain. However, several factors appeared to cloud the officials' objective assessment. First, during the inspection day, the officials closely cooperated with company representatives to jointly draft the inspection report, which they largely based on information the company provided. The officials would then send the report to the Ministry, which would use it to rate the company. Second, before the inspection, the officials declared that they did not expect to find a company that was non-compliant. The head of the Guidance subunit explained that the Ministry had delegated the inspection task to the Province only for companies that it had previously rated as compliant (i.e., 'green' or 'blue').

The inspection of a factory in July 2011 confirmed that the objectivity of the officials was questionable. Between 2009 and 2010, the Ministry had rated the factory as 'blue'. That was why the Provincial officials did not expect any non-compliant behaviour in 2011. However, in fact the factory had a history of non-compliant behaviour. In the PROPER rating of 2008-2009, the factory had been rated 'black', and in eleven of the twelve monthly self-monitoring reports the factory had sent in 2010-2011, the factory itself had declared that it had violated the legal standards for the level of Total Suspended Solids (TSS) in the water. In September 2010, a local newspaper reported on a stench the factory was causing. Citizens submitted complaints on this topic to the Pro-

19 The background and characteristics of PROPER have been discussed previously in chapter 3.

vincial environmental agency. Together with District officials and the police, the Provincial environmental agency had inspected the factory. In December 2010, the Province imposed an administrative sanction in the form of a warning. In April 2011, the Provincial agency took samples again but was still awaiting the laboratory results. Despite these alarming signs, the head of the Guidance subunit did not expect to detect violations during this inspection day. She explained that the Compliance subunit had imposed the sanction after it had received a complaint. However, the issue had eventually been resolved because the neighbours had settled their dispute directly with the factory. Therefore, it would not be necessary to note the previously imposed sanction in the PROPER report, the official said.

During the inspection day, the officials cooperated intensively with the factory's staff in one of the factory's offices in order to finish the report. At the end of the day, they gratefully accepted a box with some of the factory products. Based on the report that was drafted that day, the Ministry rated the factory 'green' that year.[20]

This case raises serious doubts about whether officials critically carried out the PROPER inspections, and suggests that the officials were vulnerable to corporate capture. It also illustrates that the different subunit monitoring initiatives produced information and trajectories that were occasionally contradictory and poorly integrated.

2.2.3 *Complaint verification in West Java*

Complaints became increasingly important in the West Java agency's process of detecting violations. In 2008, the agency received 30 complaints. In 2010, the number doubled to 60 complaints. In 2011, the number further increased to 125 complaints. During the first four months of 2012, the agency had already received 36 complaints. One official expected that complaints would peak around the month of Ramadan later that year because complainants would hope that companies would give more compensation during that time of year for alleged environmental impacts. Another official explained that the Province had become much more responsive to complaints since the enactment of the Ministerial Regulation of 2010 on complaint handling.[21] This change occurred mainly because the agency could be sued in court if it did not handle a complaint within the set time frame, she said. This accountability mechanism apparently had a stimulating effect on the agency's regulatory efforts.

Complaints could be filed in various manners, in line with the Ministerial Regulation and the West Java agency's more detailed complaint-handling policy. The Compliance subunit, responsible for complaint handling within

20 Keputusan Mentreri Lingkungan Hidup Republik Indonesia 273/2012 tentang PROPER (Lapiran II) (http://www.menlh.go.id/DATA/SKPERINGKATPROPER2012.PDF).

21 Minister of Environment Regulation 9/2010.

the agency, did indeed receive complaints through various channels. Sometimes complainants sent a letter, and they occasionally demonstrated outside of the environmental agency or Governor's office. Subunit officials also considered newspaper reports on pollution and environmental damage as formal complaints. Nevertheless, the most common way to file complaints involved sending a text message to the private cell phone of one of the subunit's officials. These telephone numbers were not public. Thus, one needed personal connections to file a complaint in this manner, which was likely to raise the official's immediate attention. Nevertheless, all complaints were eventually registered manually in a large notebook.

According to the agency's complaint handling policy, the Province's response to a complaint depended on how an official classified a complaint. For example, when a case occurred in only one District, the environmental damage was relatively limited, and the damage did not affect the community, the Province would merely supervise and (if needed) give technical support to the District in handling the complaint. The Province would have a larger role in cases where the Governor had issued the license to a company, when the environmental impact crossed District borders, or when the community was exposed to damage or pollution, or there was serious damage. The Province prioritised these cases and would collect information about them within seven days, in collaboration with the District.

The head of the Compliance subunit confirmed that, in practice, the Province would verify a complaint immediately when there were indications that the case was serious. Organised demonstrations were the primary reason for considering a case as serious. However, in contrast to the policy, the Province would usually not notify the District about its verification plans, because the latter often had good relations with industries, the subunit's head explained. Consequently, there was a risk that the District would warn the industry that a Provincial environmental agency team was on its way to verify the complaint, and violations would be covered up.

2.3 Following up on detected violations in West Java

Where the previous subsection described how institutions detected violations in West Java, this subsection explains how the agency followed up on detected violations. The explanation is based on fieldwork observations made at the West Java agency and on the analysis of regulatory trajectories of 79 cases in which industries had been found non-compliant at some point between 2008 and July 2011.

The subsection begins by observing that, in many cases, besides the Province, Districts and the Ministry of Environment were also involved in following up on violations. However, their involvement's legal basis was often unclear, and the enforcement authority sometimes shifted between them. Additionally,

the institutions often lacked a clear procedure for who was ultimately responsible for consistent industrial monitoring and halting violations. The subsection then concentrates on the West Java environmental agency's efforts to follow up on detected violations. It concludes that the two agency units that were responsible for following up on violations had different, sometimes even conflicting, strategies. Finally, this subsection focuses on the Compliance subunit, and its efforts to deal with violations that the agency had detected through complaint verification. It explains how the subunit occasionally imposed administrative sanctions but preferred to mediate between polluting industries and affected citizens and to initiate criminal prosecution. The agency's formal policy on this issue differed from the practice.

2.3.1 *Unclear division of enforcement authority between District, Province and Ministry*

Chapter 2 explained that since decentralisation, the Districts are, in principle, authorised to regulate industries located within their territory. However, there are exceptions, primarily when industries have a transboundary impact and when the Ministry takes over authority through second-line enforcement.[22] Additionally, the implementing regulation on complaint handling created another possibility for shifting authority. The regulation concerns the authorised government not handling complaints promptly. In such cases, a higher administrative level can take over. Thus, the Province can take over from the District, and the Ministry from the Province.[23]

Nevertheless, detailed authority-shifting procedures for the aforementioned situations are lacking. As a result, in practice, it is often unclear which government or institution is ultimately responsible for handling a particular case. In cases where violations are serious, transboundary, or communicated through complaints, many institutions from various administrative levels are usually involved in the monitoring and enforcement efforts. It often appears that authority shifts never took place, but that institutions handled the case jointly, with potentially negative effects.

Chapter 5 discusses a transboundary pollution case in West Java involving frequent citizen complaints and severe pollution. The case exemplifies how the unclear division of institutional authority contributed to the continuation of pollution, due to inadequate institutional enforcement.

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22 As explained in chapter 3, the EMA 2009's reference to second-line enforcement refers to the Minister of Environment's ability to take over enforcement authority from the regional government in cases where violations are severe, and the authorised District or Province does not adequately execute its regulating tasks.

23 As explained in chapter 3, the EMA 2009 appears not to offer a legal basis for such a shift of authority.

This subsection focuses more generally on situations where the division of enforcement authority is blurred. First, it focuses on PROPER, the Ministerial monitoring programme that chapter 3 and the previous subsection discussed. It explains why there are uncertainties regarding the division of authority between the Minister and regional governments, and what the consequences were in practice. Second, this subsection looks at the unclear division of authority, particularly between the District and the Province, regarding transboundary cases and complaint handling.

PROPER and enforcement authority of the Minister

Of the 79 cases where institutions followed up on violating industries in West Java between 2008 and July 2011, the Ministry of Environment imposed administrative sanctions ten times. Two cases involved the textile industries in Rancaekek, which the next chapter elaborates. In the other eight cases, in 2008, the Ministry imposed sanctions after it had detected violations through its PROPER programme.[24]

The published 2007-2008 PROPER ratings reveal that four of the sanctioned industries were rated 'black', indicating that they were committing severe violations.[25] The four others received a red rating, implying they were somewhat non-compliant. Notably, the Ministry did not sanction ten other 'red' industries. The documentation does not explain why the Ministry sanctioned certain industries and not others. Nevertheless, the Ministry's imposition of administrative sanctions on 8 of the 18 violators in West Java that were discovered through PROPER in 2007-2008 was a high enforcement rate for Indonesian standards.

The 2008-2009 PROPER ratings showed that the Ministry only repeatedly rated one of the sanctioned companies as 'black'. Apparently, in this case, the sanction had not affected sufficient, if any, change. By contrast, the Ministry rated three of the previously 'red' companies as 'blue', finding them compliant. The other four sanctioned industries, however, disappeared from the PROPER rating list altogether. The Ministry offered no public explanation for their absence or regarding whether these companies remained non-compliant, but an official from the Provincial agency explained that PROPER excludes severely non-compliant industries.

The combined 2008-2012 PROPER ratings showed that the Ministry gave the same annual rating to two of the eight industries it sanctioned in 2008.

24 The Ministry imposed these ten sanctions in 2008. Based on the retrieved documentation, it appears that in later years, the Ministry no longer imposed sanctions on industries in West Java.

25 See Appendix 1 for a table of the sequential PROPER ratings of these eight sanctioned industries. The table is based on the Ministry of Environment's publications from various years. These are accessible via http://proper.menlh.go.id/portal/?view=28&desc=1&iscollps=0&caption=PUBLIKASI (last assessed on 10 July 2018).

Most of these industries' performances deteriorated over the years. In 2008, they were rated 'red', but in 2012, they received a 'black' rating. This downgrade demonstrates that monitoring consistently and publishing results do not guarantee that companies will perform better.

The Ministry found two companies to be non-compliant for multiple, consecutive years. This finding implies that although the Ministry was aware that companies were non-compliant, it did not take adequate measures to stop their violations. This may have been because there appeared to be no legal basis for the Minister to impose administrative sanctions. After all, since decentralisation, the Districts primarily had regulatory authority. The EMA 2009 only provided a legal basis for a shift in monitoring and enforcement authority in transboundary and second-line enforcement cases. The Ministry did not specify if these conditions were applicable in cases where it imposed sanctions.

Notably, after 2008, the Ministry never again imposed administrative sanctions upon industries in West Java, either through PROPER or otherwise. In 2012, officials from the West Java environmental agency explained that the Districts were authorised to impose administrative sanctions when the Ministry detected violations through PROPER. At the same time, the officials acknowledged that Districts had never imposed sanctions after a negative PROPER rating. They explained that the Ministry had recently changed its strategy for following up on detected violations through PROPER. Instead of imposing administrative sanctions, the Ministry now aimed to criminally prosecute companies, particularly those that had been rated 'black' for three consecutive years. The officials applauded this development because they expected the deterrent effect from criminal sanctioning to translate into more compliant behaviour. On the other hand, it implied that the Minister would allow severe violations to continue before they would take action through criminal prosecution. Notably, a criminal sanction would not be able to halt the violation or recover the damages directly.

In sum, PROPER was an ad hoc regulatory programme because it inspected only a small part of Indonesia's industries. The programme existed parallel to the standard regulatory mechanism, where the licensing government was primarily responsible for monitoring and taking enforcement measures against industries. On the one hand, PROPER offered a fairly consistent monitoring method, with real risks that violating industries would face sanctions. In that sense, it resembled command-and-control regulation, even though the Ministry proudly presented it as the opposite (see chapter 3). However, particularly after 2008, the Ministry began to more inconsistently follow-up on detected violations, partially because it was unclear which government institution was responsible for this. Several Provincial- and District-level environmental agency officials considered the Ministry to have the primary responsibility for regulating industries that PROPER monitored. At the same time, the Ministry no longer imposed administrative sanctions. Thus, in 2012, it remained unclear which

institution was responsible for taking measures against violators that PROPER identified and the risk of being confronted with sanctions was small.

Juggling enforcement authority between the District and the Province

PROPER led to situations where it was unclear whether the Ministry or the District was responsible for regulating industries. However, the division of enforcement authority between the District and the Province was often also unclear.

As previously mentioned, the EMA 2009 provided a legal basis for shifting authority from the District to the Province in transboundary cases. The Ministerial Regulation on complaint handling established the possibility for shifting authority when the District did not respond to a filed complaint with sufficient speed. However, in practice, those who shifted enforcement authority from the District to the Province did not usually make the legal basis explicit. Shifts occurred rather randomly and inconsistently, as clear procedures for doing so were lacking.

The analysis of January 2008 through July 2011 case trajectories showed that the Province had followed up on some, though not all, of the violations it had detected through complaint verification. The available documents did not explain why the Province failed to follow up on certain violations.

My fieldwork observations during an inspection visit with Provincial environmental officials note the lack of clear procedures on the division of authority. In July 2011, three Compliance subunit officials inspected four industries. Before the inspections, the subunit officials prepared recommendation letters addressed to the District Head. These letters advised him to impose administrative sanctions against the companies. However, during the inspections, it became clear that although the industries had made improvements compared to the previous inspection, they were not yet compliant. In the afternoon, the officials visited the District Head. A Provincial official told him, rather positively, about the performances of the inspected industries, and advised him not to take enforcement measures. At the same time, they handed him the letters that advised the District Head to do the contrary. Later on, the Provincial officials explained there was no need to document that the oral recommendation they gave to the District Head differed from the one in the letter that they wrote before the inspections. The Province had, de facto, detected violations, but it did not report that it had recommended the District Head not to take measures. It thus became unclear which government was responsible for the fact that no measures were taken. The lack of clear authority-dividing procedures between the District and the Province meant that, de facto, the officials had considerable discretion as it was unclear what the different governments were expected to do.

The case trajectories analysis also showed that the Province had imposed administrative sanctions in many cases. However, it had merely given warn-

ings and imposed 'administrative coercion'. Notably, 'administrative coercion' meant that the government had ordered the violator to act a certain way.[26] The Province had never revoked a license.

The Compliance subunit head complained that in transboundary cases the District Head would, in practice, be able to decide if and what kind of enforcement measures would be taken against a violator. Another official stated, more generally, that the Province gathering proof of violating behaviour had never resulted in the District Head revoking the violator's license. He claimed that if the Provincial environmental agency had the authority to revoke licences, it would be able to operate more effectively.

Finally, the uncertainty regarding the division of authority also led to legal uncertainty for licensees. For example, during an inspection by the Provincial environmental agency's Compliance subunit, the director of the factory responded with agitation. A week earlier the police had also paid an inspection visit, and the director asked whether the environmental agency officials also wanted money. The officials reacted in a surprised manner, as they did not know about the police visit, but they also seemed unwilling to contact the police to ask about their inspection. This case illustrates that even relatively powerful industries had difficulty defending themselves against the corrupt behaviour of some officials. This difficulty was due, at least in part, to the fact that it was not clear which institutions were responsible for which activities. Some officials used the opportunity to extort money from licensees.

2.3.2 *Provincial agency's units and their conflicting regulatory strategies*

This section shows that units of the West Java environmental agency also responded differently to non-compliant behaviour. As mentioned previously, the subunits that fell under the Environmental Pollution Management unit tried to persuade the violator to improve its behaviour. In contrast, the Compliance subunit, which received the vast majority of citizen complaints, would swiftly seek an opportunity to confront the violator with more severe consequences (e.g., imposing an administrative sanction, initiating criminal prosecution, or compensating the damages that citizens had suffered).

In order to explain the different manners in which the units of the West Java agency dealt with detected violations, this subsection first describes a case that concerned the illegal staging of toxic waste. This case demonstrates how the units' violation response strategies conflicted. The case concerns a company that kept a pile of toxic fly ash unprotected in the open air. While the Environmental Pollution Management unit sought to solve the issue without sanctions, the Compliance subunit tried to initiate a criminal prosecution for the same act.

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26 See chapter 3 for a more elaborate discussion of 'administrative coercion' in Indonesia's environmental laws and regulations.

A complaint had informed the Compliance subunit that a company was keeping a pile of toxic fly ash unprotected in the open air. Because the case concerned a matter related to toxic material, the subunit's officials had hoped that it would be a suitable case for direct criminal prosecution, without having to first impose administrative sanctions.[27] A photo of the pile of fly ash could serve as proof. However, when the officials of the subunit arrived at the scene, they found the pile had been removed, although they could still detect its traces. The subunit's head was furious when she heard that Environmental Pollution Management unit officials had travelled to the same location a day earlier, instructing the company to remove the toxic pile. The District had informed that unit about the pile of toxic waste, asking for the Province's support in the matter. Officials from the unit immediately travelled to the industry and informed it that it should clean up the pile, which it did.

When the officials from the Compliance subunit inspected the industry, they pointed out to the director which improvements the factory still had to implement. While the director remained cooperative, at one point, he commented that he did not understand. He was usually in contact with an official from the Guidance subunit, which was also from the Provincial environmental agency. This official never pointed out these issues. The official from the Compliance subunit confirmed that the two subunits had different perspectives.

While the Compliance subunit had planned to approach the toxic waste pile case through criminal prosecution, the head of the Environmental Pollution Management unit explained why his unit took a different approach. He commented that the unit should cooperate with industries to find a solution rather than sanctioning them immediately. According to him, companies were often simply unaware of the compliance norms. It was the government's task to inform and assist them through guidance rather than sanctions. He added that the government had to consider the important economic function of industries, not least because they employed the local population.

This case demonstrated the lack of coordination between and conflicting strategies of the different (sub-)units within the Provincial agency, which led to the inefficient use of the agencies' limited regulatory resources and uncertainty for the regulated industry. It also showed that the choice for a certain regulatory approach (i.e., sanctioning or giving guidance) was determined more by which (sub-)unit would handle the case than by the characteristics of a violation itself.

In this case, the Compliance subunit aimed to criminally prosecute the violator, but in other cases, it would seek to impose administrative sanctions or try to mediate between the complainants and the company. The rest of this section focuses on the Compliance subunit's motivation to opt for administrative or criminal law enforcement, or for mediation.

27 See chapter 3 for an explanation of the 'ultimum remedium' principle and the interpretation of EMA 2009 on this issue.

2.3.3 Following up on verified complaints; the policy

As previously mentioned, the Compliance subunit received most of its cases through complaints. The agency's complaint-handling policy prescribed that within seven days after verification confirmed environmental pollution or damage, the Provincial and District teams from the environmental agencies should recommend further actions to an authorised institution, meaning the District Head or the Governor. This recommendation could constitute imposing an administrative sanction, initiating criminal enforcement, bringing the case before a private court, or trying to resolve the case through mediation. In cases of mediation, the Provincial environmental agency would act as mediator.

There are several problems with this policy. First, the policy noted that administrative sanctions are only suitable when the violator is willing to take measures. Thus, the government did not consider administrative law enforcement as an instrument through which to force the violator to become compliant, regardless of the violator's willingness to cooperate. Furthermore, that the environmental agency was to act as a mediator in pollution cases suggested that it could substitute its regulatory position for a neutral intermediary role in a pollution dispute between private parties. In this way, the agency released itself from its responsibility for taking adequate measures to protect the environmental public interest.

Moreover, the policy suggested that different regulatory approaches could not be pursued simultaneously. The agency could not recommend imposing an administrative sanction and simultaneously suggest a criminal investigation or assist in the recovery of damages that citizens had suffered. Therefore, the policy effectively forced the agency to choose whether it would prioritise the aims of administrative, criminal or private law approaches, as chapter 2 discussed, even though all of the aims could be relevant in a particular pollution case. Lastly, the policy suggested that in severe cases, the Province and District should carry out inspections together. However, the policy was unclear about which government would be authorised to decide how to follow-up on a case (e.g., who is authorised to impose an administrative sanction).

Despite the rather detailed trajectories that the Ministerial Regulation and the agency's policy on complaint handling described, the practice of the Compliance subunit often differed.

	Compliance subunit's enforcement statistics (January 2008-July 2011)	*Researcher's case trajectory reconstruction* (June 2007-July 2011)
Administrative sanction	39	38
Mediation leading to agreement	25	18
Initiating criminal prosecution	14	6[28]
Total	78	62

Figure 2. Table of follow-up action on detected violations by West Java environmental agency's Compliance subunit

2.3.4 Enforcement by the Compliance subunit, in numbers

The Compliance subunit's overview of enforcement statistics showed that between January 2008 and July 2011, the subunit had handled a relatively high number of complaints.[29] The subunit had received 205 complaints in total, 125 of which had been filed between January 2011 and July 2011. Section 2.3.5 explains the swift increase in the number of complaints in 2011.

Of the complaints that the Compliance subunit received between January 2008 and July 2011, it referred 60 cases to either the District or the Ministry of Environment. The subunit imposed an administrative sanction in 39 cases, initiated criminal prosecution in 14 cases, and mediated between the violator and the complainant(s) in 25 cases.

The enforcement statistics did not account for the remaining 67 complaints. It is possible that multiple complaints concerned the same industry. Furthermore, the statistics imply that the subunit did not use multiple regulatory strategies in one particular case, meaning for example it never imposed administrative sanctions during or before criminal prosecution or mediation. However, fieldwork showed that in reality multiple regulatory strategies were used, at least in some cases. Chapter 5 describes such a case in depth. By contrast, the subunit's rather simple overview of its enforcement efforts did not reflect such complex regulatory trajectories. This potential discrepancy raises questions about whether the subunit's overview accurately reflected its actual efforts to improve non-compliant behaviour.

28 In four of these six cases, the criminal sanction had been imposed alongside an administrative sanction or the establishment of an agreement.

29 By comparison, as section 1.2.3 mentioned, the East Java environmental agency handled approximately 8 complaints per year until 2010. However, this number quickly increased to 33 complaints in the first ten months of 2012, and to 74 in 2015.

This subsection aims to provide more insight into the daily practice behind the unit's enforcement statistics. How often did the Compliance subunit impose an administrative sanction and what did this entail? Why did the subunit opt for imposing an administrative sanction in some cases, while initiating criminal prosecution or mediation in others?

To answer these questions, I reconstructed the regulatory trajectories of more than 70 cases, based on more elaborate case summaries that the agency had produced. A comparison between the reconstruction of regulatory trajectories and the subunit's enforcement statistics, which encompass nearly the same period, shows a numerical discrepancy between the two sources. The analysis of the case trajectories concluded that the Province had imposed an administrative sanction 38 times.[30] On 18 occasions, the Province mediated between affected citizens and industries, which resulted in an agreement, which the Compliance unit called an 'Alternative Dispute Resolution sanction'.[31]

The analysis of trajectories showed that the subunit had only brought criminal charges against six industries. Four of these industries had also been involved in mediation or had faced an administrative sanction.

Notably, according to the subunit, all of the 78 cases it had followed-up on were the result of handling complaints. Thereby, it seemed that complaint handling was indeed crucial in detecting and taking measures against violators. However, the case trajectories reconstruction showed that only 27 of 62 cases stemmed from complaints. It also showed that 16 complaints had never been followed up by any verification or other regulatory action. This discrepancy indicated that the Compliance subunit overemphasised the importance of complaint handling in regulation.

The comparison between the enforcement statistics and the case trajectory analysis also reveals that the subunit's reported enforcement rates were somewhat higher than those found in the case trajectories (even though the latter covered a half year longer period). This discrepancy could indicate that the subunit exaggerated its enforcement rates. It is also possible that the documentation on which the case trajectory analysis was based was incomplete. This unresolved query brings us to a second finding, namely that the Provincial agency's archives did not provide a database sufficient for achieving a good overview of the individual case trajectories.

Regardless, the above comparison does not reveal why the agency occasionally opted for a particular follow-up method. The next section seeks to provide more insight into this matter.

30 On one occasion, the Province imposed a sanction on the same industry twice.

31 Three of these agreements had been made with one industry, namely Kahatex (see also chapter 5).

2.3.5 *Imposing administrative sanctions*

According to the case trajectories analysis, the Province imposed 38 administrative sanctions, 2 of which they imposed on the same industry successively. These administrative sanctions all involved warnings or orders to the violator to take measures. Notably, the Province never took concrete measures itself to halt the violations. As chapter 3 explained, this is unsurprising considering the legal framework for administrative sanctions in the EMA 2009. The case trajectories in West Java showed that the Provincial agency interpreted the concept as giving orders. As a consequence, in cases where the violator did not (fully) carry out the orders, the legal framework for administrative sanctioning left no other possibility for escalating the case than revoking or suspending the license.

In none of the cases where the Province imposed an administrative sanction was the legal basis for its enforcement authority clear. However, according to several officials, the Province differentiated between administrative sanctions it was and was not authorised to impose. These officials commented that the Province could not take concrete measures to halt a violation or revoke or suspend licenses. They reasoned that because the Province had not issued the violator's licenses, it did not have the power to impose severe sanctions. Consequently, the Province could only impose warnings and give orders, and was dependent on the violator for implementation. Notably, none of the Provincial officials remembered a District Head ever revoking or suspending a licence, even though they said the Province had occasionally recommended that the District Head do so.

The EMA 2009 does not provide a legal basis for the officials' reasoning that the Province had the authority to impose light administrative sanctions, but not stricter administrative sanctions. Nevertheless, the practice exemplified how Provincial officials dealt with the unclear division of authority, and particularly with shifts in authority between the District, Provincial and Central government. It showed how the Province occasionally and inconsistently played a role in law enforcement because it seemingly wanted to avoid tensions with other institutions involved in a particular case, which were unwilling to take more severe measures.

All and all, the Provincial environmental agency efforts were barely dissuasive since it did not impose administrative sanctions with concrete consequences for violators. At the same time, the Province's enforcement involvement made it less clear which institution was eventually responsible for violations continuing while institutions were aware of these violations.

In the majority of cases where it gave a warning or order, the Province never inspected whether the industry had indeed implemented the assigned measures. However, in 12 cases, the Province did carry out inspections. In 6 of these, the case trajectory documentation does not reveal the inspection findings. In the other 6 cases, inspections made clear that the violators had

partially implemented the assigned measures. In 4 cases, inspections had been carried out multiple times, showing that with every inspection compliance had improved. In fact, of all the cases that the Province had dealt with, only two industries became fully compliant after Provincial involvement. One industry was inspected three times within one year after the sanction was imposed, and was then reported as having implemented all of the orders. The other industry that became fully compliant was reported, after several inspections, as having executed all of the orders in the ADR agreement, which included its obligations under administrative law.

2.3.6 Acting as a mediator in disputes between violators and affected citizens

The Compliance subunit reported that between January 2008 and July 2011, an 'Alternative Dispute Resolution sanction' or 'ADR sanction' had been imposed in 25 cases. However, the case trajectories analysis found that industries and complainants had reached an agreement in 18 cases after the Provincial agency had acted as a mediator.[32] Furthermore, it found that 6 of these industries previously faced an administrative sanction, and on 4 of these occasions, the subunit had imposed an administrative sanction after the Province had concluded that the industry had insufficiently implemented the agreement.

These findings, particularly that the Compliance subunit referred to the agreements as 'ADR sanctions', all raise questions about how the agreements related to administrative sanctioning. As chapter 2 explained, agreements between two private parties concern, in principle, compensation for damages that one party inflicted upon another. By contrast, administrative sanctioning is particularly suitable for swiftly halting violations. However, the West Java environmental agency considered the ADR agreements as substitutes to administrative sanctions. The agreements between violators and citizens affected by environmental damage even came to resemble administrative sanctions in several ways.

Almost all agreements included measures that would promote the public interest in a cleaner environment. In fact, in nearly all cases the complaints that had initiated the mediations concerned violations of administrative norms. Therefore, the complaints could be considered requests to the regulator (i.e., the Provincial environmental agency) to enforce the law and take measures to halt the violation and recover damages, on behalf of the public. However, in none of these cases did the Provincial agency respond to the complaints by verifying whether the complainants' allegations were correct, and it did not take administrative law measures to halt any detected violation. Instead, the Province exchanged its responsibility as a regulator (i.e., promoting the

32 In the case of the Kahatex textile industry, which will be discussed extensively in chapter 6, an ADR agreement was made three times.

public interest in a clean environment by taking measures that would halt the violation) for a role as mediator in a dispute between private parties. Various agreements nevertheless included promises from violators that they would become compliant with the administrative law norms. This inclusion seemed to confirm the officials' idea that agreements between private parties could replace administrative sanctioning. Furthermore, some agreements stated that if the violator would not implement the agreed-upon points within the indicated period, the Province could impose heavier sanctions. It is unclear to what kind of sanctions this referred. However, these agreements increasingly resembled administrative sanctions through their referral to sanctions and with Provincial environmental agency officials co-signing the agreement, even as mediators.

Seven of the twelve agreements concerned issues that promoted the public interest in a clean environment as well as issues that promoted the private interests of the complainants. For example, the violator promised to give jobs, corporate social responsibility funding or other economic benefits to the complainants. The Rancaekek case, which the next chapter discusses, demonstrates that the consequences of these practices can have severe negative effects on pollution-affected communities, as not everyone who is affected by pollution can share in the compensation that is negotiated in the agreements.

In six of the twelve cases that reached an agreement, the agency never carried out another inspection to see how, if at all, the industry had implemented the agreement. In six other cases, the Province did oversee the implementation. In five of them, the inspections found that the industry had partially implemented the agreement. In one case, the Provincial agency even carried out four inspections, which led the industry to implement all of the agreed-upon points eventually. This implementation suggested that consistent follow-up increased the chances of positive industrial performance. However, the Provincial agency rarely conducted such consistent inspections.

Although agreements did occasionally contribute to the promotion of a cleaner environment, the practice of negotiating compliance also had considerable downsides. The fact that the agreements substituted for administrative sanctions caused problems. The following case demonstrates how officials believed that they were dependent on the agreement to legitimise their inspections.

In July 2011, Compliance subunit officials inspected a textile factory. One year earlier, they had acted as a mediator in the conflict between the factory and its neighbours, who had complained about the factory's wastewater quality. The mediation resulted in an agreement that implied the factory would improve the road as well as take several environmental measures (e.g., improving their wastewater treatment system). With that one-year-old agreement in hand, officials planned to check whether the factory had met the agreement. However, a factory representative said that the factory had reached a new agreement with the neighbours, one that did not include environmental

measures. One of the officials, who thought they had lost the basis for inspection, responded in an agitated manner, saying that the neighbours and factory were not allowed to reach a new agreement without notifying the Provincial agency. After all, the environmental agency had also signed the agreement, she reasoned. However, the agency had done so in the role of dispute settler, who – according to Article 86 of the EMA 2009 – should be impartial and not have any interest in the agreement. In principle, private parties may decide to make a new agreement without informing the former mediator about it. However, this private law agreement had administrative law qualities as well, and the Provincial agency had a stake in the proper execution of this agreement, for it concerned the protection of general environmental interests. These qualities became problematic when the private parties decided upon a different agreement that did not cover the protection of general environmental interests, for which the Provincial agency was responsible.

Compliance subunit officials confirmed that they considered the agreements as potential replacements for administrative sanctions. They preferred to first try to resolve cases through facilitating mediation, rather than imposing a sanction. It allowed them to circumvent the bureaucratic obstacles for dealing with violations. To explain the legal basis of this practice, one official referred to article 84 of the EMA 2009, which states that those in dispute should try to reach an 'out of court settlement' before bringing a case to court. He interpreted this article to mean that the Province should encourage an 'out of court settlement' before imposing an administrative sanction. He ignored that this article refers to conflicts between private parties, and that it differs from the administrative law framework. In the latter framework, the government is responsible for promoting public interests.

2.3.7 Criminal prosecution

Responding to violations through mediation was not the only option for how Provincial environmental agency officials could avoid taking administrative law enforcement measures. The Compliance subunit reported that between January 2008 and July 2012, it had initiated 14 criminal prosecutions against violators.[33]

Despite the limited number of criminal cases, the subunit head said that they spent approximately half of the subunit's budget on these cases. Criminal case preparations were costly, primarily because the subunit had to pay for the daily fees of public prosecutors, police and legal experts to come to the environmental office and discuss the possibilities for criminal prosecution.

33 Nevertheless, the case trajectories analysis found they only initiated criminal law enforcement against 6 industries. Four of these industries had also been confronted with an administrative sanction or had come to an agreement after mediation facilitated by the Provincial environmental agency.

Because of these costs, the agency could only initiate criminal prosecutions in two cases per year. However, until 2012, the subunit had brought no such case to court. Nonetheless, Compliance subunit officials preferred this sanction because they believed that its deterrent effect was much higher than that of administrative sanctioning or mediated agreements.

The six criminal cases all concerned violations related to hazardous and toxic waste. An official explained that this was because EMA 2009 outlines criminal law enforcement as, in principle, an 'ultimum remedium' that the relevant institution should only use after it has exhausted all other administrative law enforcement possibilities. According to the notes, this is particularly the case when violations are related to quality standards, wastewater, emissions, and nuisance. Since hazardous and toxic wastes are not listed here, the official considered the 'ultimum remedium' principle to not apply to such violations. He reasoned that administrative sanctions could not be used for these types of violations, even if there was an immediate threat to the environment.

The case described in subsection 2.3.1 illustrated the eagerness of the Compliance subunit to take on toxic and hazardous waste cases. However, this distracted the subunit's attention from other violations (e.g., wastewater violations). Furthermore, as explained in chapter 2, criminal sanctioning does not primarily aim to halt violations. Nevertheless, even though the Compliance subunit was primarily responsible for handling violations, it invested considerable time and budget in attempts to impose criminal sanctions. At the same time, this was a possibility for the environmental agency to delegate its regulatory responsibility to the public prosecutor and the criminal court.

3 Conclusion

This chapter looked at the different regulatory approaches used by the Provincial agencies of East and West Java. It aimed to explain these differences and their effects on promoting the public interest in a clean environment.

My observations confirmed Santosa's findings that a lack of budget and staff hampered the agencies' implementations. However, I also found that the agencies did not fully use their limited regulatory resources. This partial use was largely due to inconsistency in the regulatory process, in particular the monitoring of industrial environmental behaviour and post-detection enforcement against violations.

There were considerable differences between the agencies with regard to their operational contexts. For example, East Java's capital Surabaya is located at the mouth of a large river and is confronted by upstream pollution. By contrast, West Java's capital Bandung is located much further upstream, facing a lower degree of accumulated pollution. West Java also lacks East Java 's tradition of civil society actors pressuring the government to improve its

promotion of the public interest in a clean environment. These contextual factors might partially explain why the East Java environmental agency was, in several aspects, more thorough in its regulatory efforts than the West Java agency.

One of the main findings presented in this chapter is that there were considerable differences between the two provincial agencies in how they monitored and responded to violations. The East Java agency's regulatory efforts were characterised by features of command and control regulation, more so than in West Java. For example, the former conducted regulatory, unannounced and frequent follow-up inspections through the Water Patrol. Occasionally, it took concrete measures to halt a violation (e.g., in the case of the Gempolkrep sugar factory). These measures may have had some positive effect on the quality of the Brantas River.

The West Java agency's approaches were less consistent than those of the East Java agency. The agency did not conduct regular inspections and did not systematically process and assess the self-monitoring industrial reports. Nevertheless, the agency was active in responding to complaints and conducting inspections for the Ministerial programme PROPER. However, it did not gather and archive the programme's information systematically or consistently follow-up on detected violations.

Overall, this chapter concludes that regulatory initiatives with features of administrative law based, command and control regulation were fairly effective. Officials and scholars have often praised the Ministerial programme PROPER and the Water Patrol in East Java. These programmes include rather consistent monitoring and enforcement efforts and have features of command and control regulation. Nevertheless, the praises seldom acknowledge these features or do not consider them as explanations for the programmes' relative successes. Instead, the features are considered to be alternative regulatory approaches, representing the opposite of command and control. These agencies do not fully realise these programmes so long as they do not integrate them with regular command and control regulatory mechanisms. For example, when PROPER detects a violation, it is unclear which institution will follow up on it. As a result, despite proof of non-compliance, institutions often do not take effective measures to halt it.

Overall, officials in both in East and West Java avoided administrative law-based sanctioning that would have had serious and concrete consequences for violators (e.g., administrative coercion or licence revocation). Generally, they considered imposing administrative sanctions against serious environmental violations as an unfit approach. Particularly in West Java, officials preferred to respond to violations by seeking criminal prosecution against the violator. Alternatively, in cases were citizens had filed a complaint, the agencies would try to settle the case by mediating between the complainants and the violator. The case was, therefore, sidetracked from the administrative to the private law framework.

It is understandable that officials opted to avoid imposing administrative sanctions for several reasons. First, the weaknesses in the administrative sanctioning arrangements hindered effective enforcement. The definition of administrative coercion in the EMA 2009, suggesting that the government cannot take concrete measures to halt a violation, particularly weakened the government's regulatory position.

Second, policies detailing government tasks were lacking (e.g., regarding the frequency of regular monitoring and how certain institutions should follow-up on violations). As a result, the officials had discretion about if and which regulatory efforts they would undertake. The absence of clear policies on minimal governmental responsibilities resulted in there being no grounds for arguing that the government had taken too few measures.

Third, officials avoided administrative sanctioning because there was an unclear division of authority between the various involved institutions. This authority concerns the horizontal division between sectors, as well as vertically division between different administrative levels. Taking intrusive but effective measures that would have halted a violation could have led to confrontations with institutions that had other interests in the case. Therefore, officials from the many involved institutions preferred to seek consensus, referring to it as 'coordination'. Although the Water Patrol in East Java is an example of the potential benefits of 'coordination', the case studies in West Java and North Maluku demonstrate that it also carries serious negative implications. The involvement of many institutions resulted in regulatory processes that were long, inconsistent, costly and inefficient. Non-transparent 'coordination' made it unclear which institution was responsible for taking a certain decision – usually to not take intrusive enforcement measures – and why they had made that decision. This lack of transparency moreover led to more room for corruption. In general, it made it even more difficult to hold a particular government institution accountable for taking insufficient regulatory measures. The lack of accountability mechanisms meant there were few incentives for the government to perform its regulatory tasks better.

Officials also avoided administrative law enforcement because they assumed it had a limited deterrent effect in comparison to other regulatory approaches, particularly criminal law enforcement. Considering the weaknesses in the legal arrangements for administrative sanctioning, they did indeed have reason to think so. Nevertheless, officials were generally unaware of the different aims and characteristics of administrative, criminal and private law-based approaches to responding to violations and therefore could not deploy them effectively.

The West Java environmental agency usually opted to respond to complaints by mediating between complainants and violators. This created confusion regarding the government's responsibility and authority for addressing the pollution problem and placed responsibility on citizens to address the problem. Officials considered that mediating a private law dispute between

the violator and complainants was an adequate and preferred approach to addressing environmental problems. Although handling complaints in this manner appeared to legitimise the government's involvement, the administrative law framework offered the legitimate basis to intervene, regardless of the citizens' participation.

The next chapters concern pollution cases in West Java (chapter 5) and North Maluku (chapter 6). They demonstrate the negative environmental consequences of relying on regulatory approaches without properly integrating them with the basic command and control regulatory mechanism.